Cauda equina syndrome treatment

Treatments for patients with cauda equina injury are limited.

Prevention

Early diagnosis can allow for preventive treatment. Signs that allow early diagnosis include changes in bowel and bladder function and loss of feeling in groin.

Management

There remains significant uncertainty in the literature regarding the urgency for surgical intervention. The past decade has seen the emergence of the much-referred-to 48-hour limit as a possible window of safety. The ramifications of this time point are significant for early patients who may subsequently have urgent treatment delayed, and for litigation cases, after which adverse decisions are more likely to occur.

A systematic principally qualitative review of the animal and human clinical literature is presented, examining the evidence for urgent surgical decompression in CES and the much-quoted 48-hour rule.

There is significant discordance in the literature regarding whether emergency surgery improves outcomes; however, a growing consensus is the acknowledgment that biologic systems deteriorate in a continuous rather than stepwise manner. Level of neurological dysfunction at surgery (incomplete CES vs. CES with retention) is probably the most significant determinant of prognosis. Onset and duration of symptoms also are likely to have an impact, if not on overall outcome then at least on duration of neurological recovery.

There is no strong basis to support 48 hours as a blanket safe time point to delay surgery. Both early and delayed surgery may result in improved neurological outcomes. However, it is likely that the earlier the surgical intervention, the more beneficial the effects for compressed nerves, especially with acute neurological compromise [1)].

The management of true cauda equina syndrome frequently involves surgical decompression. When cauda equina syndrome is caused by a herniated disk early surgical decompression is recommended.

Cauda equina syndrome of sudden onset is regarded as a medical/surgical emergency.

Surgical decompression by means of laminectomy or other approaches may be undertaken within 48 hours of symptoms developing if a compressive lesion, e.g. ruptured disc, epidural abscess, tumour or haematoma is demonstrated. This treatment may significantly improve the chance that long-term neurological damage will be avoided.

Surgery may be required to remove blood, bone fragments, a tumor or tumors, a herniated disc or an abnormal bone growth. If the tumor cannot be removed surgically and it is malignant then

radiotherapy may be used as an alternative to relieve pressure, with spinal neoplasms chemotherapy can also be used. If the syndrome is due to an inflammatory condition e.g. ankylosing spondylitis, anti-inflammatory, including steroids can be used as an effective treatment. If a bacterial infection is the cause then an appropriate course of antibiotics can be used to treat it.

Cauda equina syndrome can occur during pregnancy due to lumbar disc herniation; age of mother increases the risk. Surgery can still be performed and the pregnancy does not adversely affect treatment. Treatment for those with cauda equina can and should be carried out at any time during pregnancy.

Lifestyle issues may need to be addressed post - treatment. Issues could include the patients need for physiotherapy and occupational therapy due to lower limb dysfunction. Obesity might also need to be tackled.

Rehabilitation

Physical therapy can be somewhat useful for patient’s recovery from surgery (Kennedy, Soffee, McGrath, Stephens, Walsh, & McManus, 1999).

The main focus of rehabilitation is centered on controlling the bladder and bowel functions and decreasing muscle weakness in the lower extremities.

Bowel and bladder control Rehabilitation of CES depends on the severity of the injury. If permanent damage occurs, then impairment in bladder and bowel control may result (Hodges, 2004).[full citation needed] Once surgery is performed, resting is required until the bladder and bowel dysfunction can be assessed (Hodges, 2004). Urinary catheterization may help with bladder control (Hodges, 2004). Gravity and exercise can help control bowel movement (Hodges, 2004). Pelvic floor exercises assist in controlling bowel movements (Pelvic Floor Exercises, 2010).[full citation needed] These exercises can be done standing, lying, or on all fours with the knees slightly separated (Fig. 2). Full recovery of bowel and bladder control can take as long as two years (Hodges, 2004).

Physical Therapy Physical therapist can assist in sitting stability, and transferring by working on strength training. Therapists will work on balance, gait, and transfers since muscle weakness or paralysis may occur in the lower extremities (Dawodu, 2013).[full citation needed] Additionally, electrical stimulation is also helpful to enhance muscle tone

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Chau AM, Xu LL, Pelzer NR, Gragnaniello C. Timing of surgical intervention in cauda equina syndrome: a systematic critical review. World Neurosurg. 2014 Mar-Apr;81(3-4):640-50. doi: 10.1016/j.wneu.2013.11.007. Review. PubMed PMID: 24240024.